

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF NEBRASKA

SOCORRO O'NEILL,
as the personal representative of the
Estate of Timothy O'Neill,

Plaintiff,

vs.

UNION PACIFIC RAILROAD
COMPANY,

Defendant.

8:18CV385

MEMORANDUM AND ORDER

Socorro O'Neill, as personal representative of the Estate of Timothy O'Neill (Plaintiff) is suing Union Pacific Railroad Company (UPRR), under the Federal Employers Liability Act (FELA) [45 U.S.C. § 51 et seq.](#), alleging exposure to "diesel fuel/fumes/exhaust, benzene, herbicides and asbestos fibers" while working in Defendant's yards, buildings and along its right of ways caused or contributed to Timothy O'Neill's development of multiple myeloma and resulting death. ([Filing No. 1, at CM/ECF p. 2](#)). On August 09, 2019, Plaintiff designated Ernest P. Chiodo, M.D., J.D., M.P.H., M.S., M.B.A., C.I.H., to testify as Plaintiff's expert witness, ([Filing No. 31-2, at CM/ECF p. 1](#)), with his report dated August 16, 2019. ([Filing No. 31-2](#)) and served on August 21, 2020.

UPRR moves to exclude Dr. Chiodo's opinions, arguing Dr. Chiodo's foreseeability and negligence opinions were not timely and adequately disclosed; his medical causation opinions stating "possible" rather than probable or likely causes of Timothy O'Neill's multiple myeloma are irrelevant and inadmissible; and his foreseeability and medical causation opinions are irrelevant, unreliable, and inadmissible under Rule 702 and [Daubert v. Merrell Dow Pharms., Inc., 509 U.S.](#)

579 (1993). UPRR further moves for summary judgment because without Dr. Chiodo's testimony, Plaintiff cannot meet the essential elements of his FELA claim.

For the reasons discussed below, UPRR's motion to strike Dr. Chiodo's opinions, ([Filing No. 30](#)), and its motion for summary judgment, ([Filing No. 29](#)), will be granted.

MOTION TO STRIKE EXPERT OPINIONS

A. Statement of Facts

Consistent with the court's local rules, only those facts cited, by page, in the parties' briefs were considered by the court in evaluating Defendant's pending motion to strike Dr. Chiodo's opinions. See NECivR 7.1(a)(2)(A) & (b)(2)(A). Those facts, assumed to be true for the purposes of this motion, are as follows:

Timothy O'Neill was employed as an electronic communications technician at Union Pacific from 2002 to 2015. ([Filing No. 31-9, at CM/ECF p. 21](#), 77:3-78:18). In 2015, at the age of 56, he was diagnosed with multiple myeloma, a cancer of the blood. ([Filing No. 31-9, at CM/ECF pp. 7](#), 22 at 28:22-25, 86:13-16). Timothy O'Neill died on January 19, 2017. This lawsuit is brought by Socorro O'Neill, his widow and the personal representative of his Estate. ([Filing No. 1, at CM/ECF p. 1](#), ¶¶ 2-3).

Timothy O'Neill was an electronic communications technician for UPRR. His duties included spraying weeds, ([Filing No. 31-9, at CM/ECF p. 16](#)), 57:10-15) and he carried a pump spray container labelled "Roundup" in his truck. ([Filing No. 31-9, at CM/ECF p. 35](#), 38, 133:10-134:12, 146:20-147:13). When he came home

from work, his clothes had a chemical smell. ([Filing No. 31-9, at CM/ECF p. 22](#), 83:20-25).

Dr. Chiodo, Plaintiff's sole expert for this case, is a medical doctor and an industrial hygienist. Dr. Chiodo was designated to testify on the issues of "general and specific causation of the Plaintiff's Decedent's injuries," and "notice and foreseeability." ([Filing No. 31-2, at CM/ECF p. 1](#)). He was not designated to testify on whether the railroad was negligent; for example, that it should not have used specific chemicals or substances, or that it failed to adequately monitor employee exposure to hazardous materials, provide appropriate personal protective equipment, warn employees of the risks caused by exposure to hazardous substances, or train employees on how to avoid those risks.

Although Plaintiff's complaint lists other chemicals, Dr. Chiodo found no causal connection between multiple myeloma and exposure to diesel exhaust, creosote, or benzene. His report states "herbicides" and "railroad work" caused Timothy O'Neill's multiple myeloma. ([Filing No. 31-3, at CM/ECF p. 3](#), 14, 9:19-10:9, 51:10-19). Dr. Chiodo opines:

Based upon my review of the records in this matter, it is my opinion to a reasonable degree of medical and scientific certainty that Mr. Timothy O'Neill was at increased risk for development of multiple myeloma due to his railroad work. Railroad workers are at increased risk of developing multiple myeloma. Exposure to herbicides is known to cause multiple myeloma.

. . .

It is my opinion is to a reasonable degree of medical and scientific certainty . . . that Mr. O'Neill had exposures capable of causing his multiple myeloma. A differential diagnosis of etiology indicates that his railroad exposures including exposure to herbicides were causes of his multiple myeloma. It is my opinion that exposure, general causation, and specific causation are satisfied as it relates to the railroad employment, exposures, and multiple myeloma of Mr. O'Neill.

([Filing No. 39-2, at CM/ECF pp. 6-7](#)).

Dr. Chiodo has not published any articles on herbicides or railroad work. ([Filing No. 31-3, at CM/ECF p. 28](#), 109:11-110:12.) He has not performed no primary or secondary research on multiple myeloma, herbicides, or railroad work. He has not worked for a railroad. ([Filing No. 31-3, at CM/ECF p. 28](#), 109:11-110:12.)

In formulating his opinions, Dr. Chiodo reviewed and considered: 1) Plaintiff's Complaint, Answers to Interrogatories, and Responses for Request for Production; 2) Timothy O'Neill's medical records from Barnes Jewish Hospital, Dr. Shadi Haddadin, SSM Health St. Mary's-Jeff City, and Washington University in St. Louis Physicians; 3) Socorra O'Neill's deposition transcript; and 4) Socorra O'Neill's responses when Dr. Chiodo interviewed her. ([Filing No. 39-2, at CM/ECF pp. 4-5](#)). Dr. Chiodo did not review any other documents or interview anyone else who may have knowledge regarding Timothy O'Neill's exposure to hazardous substances while working at UPRR.¹ ([Filing No. 31-3, at CM/ECF pp. 28](#), 12,

¹ After Dr. Chiodo was deposed, Plaintiff's counsel deposed a co-employee of Timothy O'Neill, Mr. Richard Wineman. This deposition is not relevant to deciding whether Dr. Chiodo possessed a sufficient factual basis for his opinions—Dr. Chiodo not have or consider Wineman's deposition, or the documents attached to his deposition, before formulating his opinions.

Moreover, Mr. Wineman worked with Timothy O'Neill only two or three times. ([Filing No. 39-10, at CM/ECF p. 10](#), 35:8-18, 37:2-10.) On one of those occasions, he saw Mr. O'Neill "putting down something" with a spray wand, but he does not know what it was. ([Filing No. 39-10, at CM/ECF p. 10](#), 37:11-25). Mr. Wineman has no knowledge of how often or for how long Timothy O'Neill's job tasks included spraying, or what was in his spray tank. ([Filing No. 39-10, at CM/ECF p. 11](#), 38:12-39:15).

46:18-25, 112:21-24 Dr. Chiodo did not review the MSDS sheets for any herbicides, including Roundup. See [Filing No. 39-2, at CM/ECF pp. 4-5](#).

From the information he reviewed, Dr. Chiodo noted that Timothy O'Neill, as an electronic communications technician for UPRR, was required to keep his work area accessible and to do so, he had to cut down and spray weeds with weed killer. ([Filing No. 31-2, at CM/ECF p. 5](#)). Socorra O'Neill saw a frosted white plastic pump sprayer, with the word "Roundup" on the container, in the bed of Timothy O'Neill's work truck, ([Filing No. 31-2, at CM/ECF p. 5](#) (citing [Filing No. 31-9, at CM/ECF p. 38](#))); (see also [Filing No. 31-3, at CM/ECF p. 26](#), 101:2-15)), and when Timothy O'Neill came home, his clothing smelled "kind of like – not really like a specific chemical. I can't – I can't say a specific like gasoline or something, no, but it was chemically." ([Filing No. 31-2, at CM/ECF p. 5](#)) (quoting Socorra O'Neill Dep., [Filing No. 31-9, at CM/ECF p. 22](#), 83:8-23).

Dr. Chiodo's report outlines his "Understanding of the Facts" as follows:

Timothy O'Neill (D.O.B.: 6/1/1959) was employed as an electronic communications technician for the Defendant repairing radios that provided signals for the train tracks. He used herbicides heavily to maintain communications sites along the rail. He had a history of smoking 5 to 10 cigarettes per day. He died due to multiple myeloma. I called Socorro O'Neill, the widow of Mr. O'Neill, . . . on July 15, 2019. She indicated that there would be a peculiar smell on Mr. O'Neill and his clothing when he would return home from work. His clothing and skin would be covered with soot. His clothing would on occasion have areas of a smoky smelling tar like discoloration.

([Filing No. 31-2, at CM/ECF p. 5](#)).

When deposed, Dr. Chiodo testified that the odor of Timothy O'Neill's clothing was not relevant to his opinion because he could not identify whether the smell was "because of herbicides or not, or some other exposure." ([Filing No. 31-3, at CM/ECF p. 13](#), 50:8-51:5). And Dr. Chiodo did not assume, for the purposes

of his opinions, that Timothy O'Neill used or only used Roundup to spray weeds. Although Socorra O'Neill stated she saw Roundup in Timothy O'Neill's truck, Dr. Chiodo explained "Roundup is not the only herbicide that's available." ([Filing No. 31-3, at CM/ECF p. 26](#), 101:2-14.) "It could have been other herbicides. Like, again, agent orange was an herbicide. It had – I am not sure that it contained glyphosate. I believe that it contained dioxin as a contaminant." ([Filing No. 31-3, at CM/ECF p. 26](#), 101:21-25). Even had Dr. Chiodo assumed that Timothy O'Neill used Roundup, he formed his opinions without knowing or researching the chemical composition of Roundup. ([Filing No. 31-3, at CM/ECF p. 28](#), 109:11-110:12). He was unable to identify the chemical components of herbicides that he believes cause multiple myeloma. ([Filing No. 31-3, at CM/ECF p. 2](#), 6:15-20) ("No, the literature that I cite, it talks about exposure to herbicides. Maybe somebody else has a better, you know, a better feel for what's in herbicides.").

Dr. Chiodo formed his opinions without knowing or reviewing Timothy O'Neill's job description or duties. Instead, he Dr. Chiodo "envisioned" the tasks of a railroad electronic communications technician, and from that, assumed he understood Timothy O'Neill's job. He formulated his opinions without reviewing or asking to review any sampling data for Timothy O'Neill or any worker performing a job comparable to O'Neill's. Dr. Chiodo does not know how much herbicide spray was used, the concentration of that spray, for how long it was sprayed at a time (e.g., five minutes, one hour, all day, etc.), how often it was sprayed (e.g., daily, weekly, monthly, seasonally, etc.), or whether Timothy O'Neill applied the spray himself rather than being in the vicinity as others did that job. Dr. Chiodo did not interview any of Mr. O'Neill's co-workers to determine exposure information regarding herbicides, and he did not ascertain whether Mr. O'Neill was provided with or wore any personal protective devices while working. ([Filing No. 31-3, at CM/ECF pp. 13-15](#), 24, 52:1-55:18, 58:13-59:22, 94:1-8).

Dr. Chiodo opines that “railroad work” causes multiple myeloma, but he could not explain why. ([Filing No. 31-3, at CM/ECF p. 16](#), 23, 60: 23-62:20, 89:17-92:18.) “Again, the railroad work, whatever exposures happen in the railroad, because railroad work in general as an occupational activity is known to cause an increased risk of multiple myeloma. . . .” ([Filing No. 31-3, at CM/ECF p. 2](#), 6:4-8.). Dr. Chiodo could not identify a specific relevant exposure from railroad work that causes or contributes to multiple myeloma. ([Filing No. 31-3, at CM/ECF p. 17](#), 65:1-13). But he nonetheless concluded that “as a general class, working for the railroad, you are going to be more likely to develop multiple myeloma than if you are -- if you do not work for the railroad. There may be other occupations that also have increased risk. But working for a railroad is an increased risk for multiple myeloma compared to the general population.” ([Filing No. 31-3, at CM/ECF p. 16](#), 62:14-20).

Dr. Chiodo reviewed a few studies stating there was an “association” between exposure to herbicides and multiple myeloma, and relying on his education, training and experience, interpreted those studies to say herbicide exposure caused Timothy O’Neill’s multiple myeloma. ([Filing No. 31-3, at CM/ECF p. 4](#), 16:11-16.), He did not employ an established methodology to find causation rather than association, such as using Bradford Hill criteria. ([Filing No. 31-3, at CM/ECF p. 6](#), 21:6-22:17.) Instead, he determined whether 1) the substance is a known carcinogen and 2) there was a biologically plausible exposure. ([Filing No. 31-3, at CM/ECF pp. 5-6](#), 18:3, 21:11-23; 22:15-24). Dr. Chiodo explained that by “reviewing the literature, knowing the science, whatever,” he can, as in Timothy O’Neill’s case, “render an opinion corroborated by the peer-reviewed literature that the term “association” means “causation” under the facts presented. ([Filing No. 31-3, at CM/ECF p. 4](#), 16:11-16.) “[A]ssociation means that there's a correlation. It doesn't necessarily mean causation. But just because – if somebody uses the term

“association,” it doesn’t mean that they don’t mean “causation.” ([Filing No. 31-3, at CM/ECF p. 5](#), 17:19-23)

Relying on his background, education and experience, Dr. Chiodo first considered whether herbicides and railroad work can cause multiple myeloma. He then searched for peer-reviewed medical articles to corroborate and support his opinions. ([Filing No. 31-3, at CM/ECF p.6](#), 23:12-24:9). His report cites four scientific articles supporting his opinion:

Cancer Causes Control. 1992 Nov;3(6):555-68.

Occupational risk factors for multiple myeloma among Danish men.

Heineman EF, Olsen JH, Pottern LM, Gomez M, Raffn E, Blair A.

J Occup Med Toxicol. 2008 Nov 17;3:27.

Multiple myeloma and farming. A systematic review of 30 years of research. Where next?

Perrotta C, Staines A, Cocco P.

J Hematol Oncol. 2019 Jul 5;12(1):70.

Glyphosate induces benign monoclonal gammopathy and promotes multiple myeloma progression in mice.

Wang L, Deng Q, Hu H, Liu M, Gong Z, Zhang S, Xu-Monette ZY, Lu Z, Young KH, Ma X, Li Y.

Am J Ind Med. 1992;22(3):305-12.

Malignant lymphoproliferative diseases in occupations with potential exposure to phenoxyacetic acids or dioxins: a register-based study.

Eriksson M, Hardell L, Malmer H, Weiner J.

Dr. Chiodo states the article “Multiple myeloma and farming: A systematic review of 30 years of research. Where next?” by Carla Perrotta, et al. (the “Perrotta Study”), supports his conclusion that “exposure to herbicides causes an increased risk of multiple -- multiple myeloma.” ([Filing No. 31-3, at CM/ECF p. 24](#), 94:5-22.) But the study identifies pesticide exposure as a possible risk factor for multiple myeloma. Citing three studies, the Perrotta Study further states herbicide

exposures show no increase in the risk of multiple myeloma. ([Filing No. 31-6, at CM/ECF p. 3](#)) (emphasis added).

Dr. Chiodo cites a study on mice, “Glyphosate induces benign monoclonal gammopathy and promotes multiple myeloma progression in mice” by Lei Wang, et al. (“Wang Study”), as supporting a causal link between herbicide exposure and multiple myeloma in humans. ([Filing No. 31-4, at CM/ECF p. 5-6](#)). Dr. Chiodo states studies on mice are applicable to humans and show general causation. ([Filing No. 31-3, at CM/ECF p. 26](#), 103:3-14.). The Wang Study notes the International Agency for Research on Cancer (IARC), the cancer agency of the World Health Organization (WHO), suggests that glyphosate exposure is positively associated with multiple myeloma, while “other national and international agencies like the US Environmental Protection Agency (EPA), European Food Safety Authority, European Chemicals Authority, and the Joint Food and Agriculture Organization of the United Nations and WHO have maintained that glyphosate is unlikely to pose a carcinogenic risk.” ([Filing No. 31-8, at CM/ECF p. 1-2](#)). When asked about the Wang Study at his deposition, Dr. Chiodo testified that he did not thoroughly review the study and he will not be citing it as supporting his opinions at trial. ([Filing No. 31-3, at CM/ECF p. 24](#), 96:23-99:16.) The court further notes that in his deposition, Dr. Chiodo identified herbicides, in general, not glyphosate specifically as a causal agent for myeloma.

Dr. Chiodo cites “Occupational Risk Factors for Multiple Myeloma Among Danish Men” by Ellen F. Heineman, et al. (the “Heineman Article”), as corroborating his opinion that railroad work causes multiple myeloma. ([Filing No. 31-4, at CM/ECF p. 3](#)). The study evaluated data collected by the Danish government for 1,098 Danish males diagnosed with multiple myeloma from 1970 to 1984. After excluding data which lacked occupational information, the study was left with 835 multiple myeloma cases and 2,979 controls. The article states “[r]isk

of myeloma was significantly elevated among road and railroad workers, precision metalworkers, and workers in the transportation and communication industries.” But of the 835 multiple myeloma cases, only 12 were “road/railroad workers.” ([Filing No. 31-5, at CM/ECF pp. 1, 4 at Table 1](#)). Further, although the study investigated 39 potential causal agents, none were herbicides. ([Filing No. 31-5, at CM/ECF p. 8](#), Table 4). And “[o]nly men employed in jobs which entailed possible exposure to engine exhausts or to raw milk had a significantly increased risk of myeloma.” ([Filing No. 31-5, at CM/ECF p. 6](#)). The study concluded that after consideration of the study limitations, “[t]he lack of strong and consistent associations in these and other data, and the low attributable risk for most occupational exposures probably reflect a relatively minor role for occupation in the etiology of [multiple myeloma].”

When asked about the relevance of the Heineman Article, Dr. Chiodo could not explain how the exposures of railroad workers in Denmark would be comparable to what Mr. O’Neill experienced as a UPRR electronic communications technician in the United States nearly two decades later.² ([Filing No. 31-3, at CM/ECF p. 16](#), 63:10-64:25). Rather, Dr. Chiodo explained that Mr. O’Neill “works for the railroad. He is clearly a railroad worker, and working in, around railroad causes an increased risk of multiple myeloma. That was my understanding or belief when I reviewed the records. And that was corroborated, is corroborated by the peer-reviewed literature as demonstrated by the article by Heineman.” ([Filing No. 31-3, at CM/ECF p. 16](#), 64:19-25).

Finally, Dr. Chiodo cites “Malignant lymphoproliferative diseases in occupations with potential exposure to phenoxyacetic acids or dioxins: a register-based study,” by Dr. Mikael Eriksson, et al. (“Eriksson Study”) as supporting his

² Timothy O’Neill began his railroad employment in 2002. The data collected for the Heineman Article encompassed persons with multiple myeloma from 1970 through 1984.

general causation and foreseeability opinions. (See Chiodo Rep., Ex. 4, at 4-5). The purpose of the Eriksson Study was to evaluate the risk for malignant lymphoma and multiple myeloma in farming, as well as in other occupations³ due to potential exposure to “chlorinated compounds with dioxin impurities,” including “chlorophenols used as impregnating agents, mainly in saw mills and building construction,” hexachlorophene, “a detergent which has been extensively used within the health care system,” and polychlorinated biphenyls (PCBs) used in a wide range of industrial products. ([Filing No. 31-7, at CM/ECF p. 2](#)). In 1992, these chemicals were widely used in Sweden as herbicides in agriculture and forestry. ([Filing No. 31-7, at CM/ECF p. 1](#)). However, in this case, Dr. Chiodo does not know the composition of Timothy O’Neill’s herbicide exposure, and the documents he reviewed do not state Timothy O’Neill used sprays with the chemical compounds discussed in the Eriksson Study while working for UPRR.

Relying on the Eriksson Study, Dr. Chiodo concluded: “Knowledge that herbicides were a cause of multiple myeloma was known since at least the early years of employment by Mr. O’Neill with the railroad.” ([Filing No. 31-4, at CM/ECF p. 7](#)). See also, [Filing No. 31-3, at CM/ECF p. 19](#), 75:10-18. He explains that based on the Eriksson Study, UPRR “should have had personnel, sophisticated personnel, physicians and industrial hygienists, toxicologists that either they had employed or were consulting to monitor the literature to see what’s out there, to size it up, make an assessment as to whether or not there was a likely risk. ([Filing No. 31-3, at CM/ECF p. 18](#), 71:12-18). And if the railroad did not offer the proper personal protective equipment it should have promulgated rules to minimize herbicide exposure. “[T]here should be actions taken to keep -- to keep him from being in the zone of exposure so he could have—so that he would not have

³ The listed occupations did not include railroad workers.

exposure, dermal, inhalational, or enteral, that is through the gastrointestinal tract, to the herbicides. ([Filing No. 31-3, at CM/ECF p. 18](#), 70:5-9).

Having concluded herbicide exposure and railroad work can cause multiple myeloma, Dr. Chiodo states he then performed a differential etiology assessment to determine the specific cause of Timothy O'Neill's multiple myeloma. ([Filing No. 31-3, at CM/ECF p. 19](#), 21, 75:2-3, 84:1-22). As potential causes, he ruled in Mr. O'Neill's railroad employment, his exposure to herbicides, his smoking history, age, and gender, and idiopathy, ([Filing No. 31-3, at CM/ECF pp. 2](#), 22, 5:11-8:21, 87:1-88:9), acknowledging that any one of these risk factors could be a cause or even the sole cause for Mr. O'Neill's multiple myeloma. ([Filing No. 31-3, at CM/ECF p. 22](#), 88:19-25.).

Dr. Chiodo concluded that all the causal factors he ruled in were "possible" causes of Timothy O'Neill's multiple myeloma, explaining:

I have to consider them all as causes from -- for his multiple myeloma, because I cannot -- I cannot exclude any of the -- any of those stated causes considered in the differential diagnosis. And I can't, I can't even minimize them. I can't say, well, you know, this is less because of this particular circumstance. They are all, they are all possible causes for his multiple myeloma, either individually or in combination.

([Filing No. 31-3, at CM/ECF p. 23](#), 89:1-9)

It is just I consider the possible causes, the likely causes. Can I eliminate any of them? No. May or may -- like, say, you know, say you had somebody that had some situation where I can say I can eliminate this as a cause because I can eliminate the exposure. No, I can't. I can't. They are all possible causes. I can't eliminate the cigarette smoking. I can't eliminate that. They would like it if I could, but I can't. So these all remain the possible causes. Each one of them is a possible cause.

([Filing No. 31-3, at CM/ECF p. 27](#), 107:15-25.)

[T]he herbicide, and I think, I think what they are -- you asked me earlier about what the chemical was, I think it is the glyphosates was what we are thinking currently as the cause. Something about the glyphosates, I mean get exposed, a glyphosate could have caused -- came in, and in a particular person be the sole cause because that actually hit the molecule and caused the malformation. Caused the genetic abnormality that caused the cancer. We don't know. We will not -- not with our current technology will we be able to know which one of these possibilities caused it. They are all causes. And there's - - and as I am not aware of any way to eliminate any of the stated causes or minimize their contribution.

([Filing No. 31-3, at CM/ECF pp. 23](#), 90:8-22)

Dr. Chiodo's expert report contained no opinions on Union Pacific's negligence or breach any its duty of care owed to Timothy O'Neill. ([Filing No. 31-4](#)). However, during Dr. Chiodo's deposition, Plaintiff's counsel advised Dr. Chiodo that he was expected to testify on the issue of negligence. ([Filing No. 31-3, at CM/ECF p. 17](#), 67:18-68:2). Thereafter, Dr. Chiodo testified that UPRR should have either (1) provided Mr. O'Neill with adequate personal protective equipment; or (2) if Mr. O'Neill was not spraying the herbicides personally, then UPRR should have prevented him from entering any sprayed area until the herbicide was fully dissipated. ([Filing No. 31-3, at CM/ECF p. 17-18](#), 68:8--70:6.)

But Dr. Chiodo admitted he knows nothing about UPRR's safety policies and procedures relating to herbicide spraying. ([Filing No. 31-3, at CM/ECF p. 14](#), 18, 55:19-24, 70:17-71:5.) He further admitted that UPRR was not negligent in exposing Mr. O'Neill to railroad work. "But working in the railroad, well, we need railroads. There's nothing that we specifically identified as to that particular point.

So, I can't say that the railroad was negligent. We just need railroads. There's nothing specifically they could have done." ([Filing No. 31-3, at CM/ECF p. 19](#), 75:4-9.)

B. Untimely Disclosed Opinions

1. Standard of Review

Pursuant to Rule 26(a)(2)(B)(i), Plaintiff was obligated to timely disclose an expert report, prepared and signed by Dr. Chiodo, which contained a complete statement of all opinions the witness will express and the basis and reasons for those opinions. A party must "supplement or correct" a previous disclosure that is "incomplete or incorrect." [Fed. R. Civ. P. 26\(e\)](#). But a proper supplement does not attempt to gap-fill or strengthen a party's case-in-chief. [Bowen v. Allied Prop. & Cas. Ins. Co.](#), 2012 WL 3303266, at *4 (D. Neb. Aug. 13, 2012) (internal citation omitted). Allowing a supplemental disclosure simply to enhance or expand on a previous expert disclosure would be "the antithesis of the full expert disclosure requirements stated in Rule 26(a)." [Id.](#) (emphasis added).

Under Rule 37(c)(1), a party who fails to provide a full disclosure as required under Rule 26(a)(2)(B)(i) is not permitted to use the undisclosed opinions at a trial, at a hearing, or on a motion unless the nondisclosure was harmless or there was "substantial justification" for failing to timely disclose the expert's opinions. The district court has wide discretion to fashion a remedy or sanction, including exclusion of evidence or opinion testimony, as appropriate for the particular circumstances of the case. [Wegener v. Johnson](#), 527 F.3d 687, 692 (8th Cir. 2008) (holding that exclusion of untimely disclosed expert testimony was "within the bounds of [the court's] discretion").

2. Analysis

This case was filed nearly two years ago. The court's scheduling order, filed on April 12, 2019, includes the parties' proposed deadlines for case progression, and it set August 5, 2019 as Plaintiff's deadline for serving complete expert disclosures. ([Filing No. 12](#)). With the consent of UPRR's counsel, Plaintiff disclosed the report of Dr. Chiodo's opinions on August 21, 2019. ([Filing No. 31-2](#)). The designation signed by Plaintiff's counsel and accompanying Dr. Chiodo's report states that in addition to medical causation, Dr. Chiodo would testify as to notice and foreseeability: It does not mention negligence, liability, or breach of duty.

Dr. Chiodo's report itself does not mention what, if anything, the railroad allegedly did or failed to do in violation of its duty to provide Timothy O'Neill with a safe place to work. As to the issue of foreseeability, the report includes one sentence: "Knowledge that herbicides were a cause of multiple myeloma was known since at least the early years of employment by Mr. O'Neill with the railroad." ([Filing No. 31-2, at CM/ECF p. 9](#)). The report provides no explanation for this statement.

As to the issue of foreseeability, Dr. Chiodo testified that the Eriksson Study provided notice to the railroad that exposure to herbicides can cause multiple myeloma, and then explained what he believed the railroad should have done to alleviate that risk. When UPRR asked Dr. Chiodo to confirm that he was not providing testimony on the issue of negligence, Dr. Chiodo deferred to Plaintiff's counsel, who in turn stated Dr. Chiodo was retained for that purpose. UPRR asked Dr. Chiodo to disclose his opinions on that topic, and Dr. Chiodo testified as to the

measures he believed the railroad should have implemented to adequately protect Timothy O'Neill from the dangers posed by exposure to herbicides.

Here, Plaintiff's counsel has presented no facts or argument explaining why Dr. Chiodo's negligence opinions were not timely disclosed in his report. As to the issues of notice and foreseeability, there is no evidence explaining why Dr. Chiodo's report fails to disclose the basis and reasons for that opinion. As such, there is no showing of any substantial justification for providing an incomplete expert report. And Dr. Chiodo's deposition, taken through the expense and efforts of UPRR, cannot fairly be interpreted as a supplement to the report—particularly when there is no showing the opinions could not have been timely disclosed and serve only to fill gaps in the initial, apparently incomplete, report. Moreover, the delayed disclosure of opinions is not harmless when it has the effect of causing delay or disrupting progression. [Wegener](#), 527 F.3d at 692 (reasoning that the need to postpone a trial due to a delayed expert witness disclosure can be harmful). Here, the court is attempting to timely progress more than 70 cases against UPRR filed by Plaintiff's counsel. Delays, particularly without explanation, disrupt not only the parties' ability to reach case resolution, but the use of the court's limited resources.

For the foregoing reasons, Dr. Chiodo's opinions as to notice, foreseeability, and breach of UPRR's duty to provide a reasonably safe place to work are stricken as untimely and insufficiently disclosed.

C. "Possibility" opinions.

UPRR argues Dr. Chiodo made no attempt to distinguish between mere possible causes and probable or likely causes of O'Neill's multiple myeloma. ([Filing No. 33, at CM/ECF p. 25](#)). "Dr. Chiodo candidly admits that Mr. O'Neill's alleged

occupational exposures are only possible causes for his multiple myeloma, and that other causes such as smoking, age, male gender, and idiopathic chance (bad luck) could be the sole cause.” ([Filing No. 33, at CM/ECF p. 26](#) (emphasis in original)).

Here, Dr. Chiodo’s report states:

[I]t is my opinion to a reasonable degree of medical and scientific certainty that Mr. Timothy O’Neill was at increased risk for development of multiple myeloma due to his railroad work. Railroad workers are at increased risk of developing multiple myeloma.

. . .

It is my opinion is to a reasonable degree of medical and scientific certainty as a Certified Industrial Hygienist; toxicologist; and occupational medicine, public health and general preventive medicine, and internal medicine physician that Mr. O’Neill had exposures [to railroad work and herbicides] capable of causing his multiple myeloma.

([Filing No. 31-2, at CM/ECF p. 8-9](#)).

However, during his testimony under oath, and despite numerous opportunities to state that railroad work and herbicides probably or likely caused or contributed to Timothy O’Neill’s multiple myeloma, Dr. Chiodo was less certain. When discussing the outcome of his differential etiology assessment, he testified that railroad work and exposures to herbicides were “possible causes” for Timothy O’Neill’s multiple myeloma, either individually or in combination with other possible causes, ([Filing No. 31-3, at CM/ECF p. 23](#), 89:1-9); “They are all possible causes . . . these all remain the possible causes. Each one of them is a possible cause, ([Filing No. 31-3, at CM/ECF p. 27](#), 107:15-25.). He does not “know which one of these possibilities caused it. They are all causes. And there’s -- and as I am not

aware of any way to eliminate any of the stated causes or minimize their contribution.” ([Filing No. 31-3, at CM/ECF pp. 23](#), 90:8-22).⁴

“Medical expert testimony regarding causation based upon possibility or speculation is insufficient; it must be stated as being at least ‘probable,’ in other words, more likely than not.” [Barrett v. Rhodia, Inc.](#), 606 F.3d 975, 984 (8th Cir. 2010). Dr. Chiodo’s testimony does not meet the “probable” or “more likely than not” standard for admissibility; that is, he did not testify that exposure to railroad work and herbicides probably or likely caused or contributed to Timothy O’Neill’s multiple myeloma. Dr. Chiodo’s medical causation opinions are therefore inadmissible and insufficient to oppose a motion for summary judgment.

D. Daubert review.

1. Standard of Review

The admissibility of expert testimony is governed by Rule 702 of the Federal Rules of Evidence which states:

If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise, if (1) the testimony is based upon sufficient facts or data, (2) the testimony is the product of reliable principles and methods, and (3) the witness has applied the principles and methods reliably to the facts of the case.

[Fed. R. Evid. 702](#). The court serves as a gatekeeper to “ensure that any and all scientific testimony or evidence admitted is not only relevant, but reliable.” [Daubert](#),

⁴ The court notes that Dr. Chiodo is both a doctor and a practicing lawyer. He teaches at law schools and represents clients in toxic tort litigation. He is therefore no doubt aware of the admissibility distinction between evidence discussing possible causes and probable causes of medical conditions.

509 U.S. at 589. The opinion of an expert witness is reliable if (1) it is based on sufficient facts or data, (2) it is the product of reliable principles and methods, and (3) the expert has reliably applied the principles and methods to the facts of the case. *Id.* An expert opinion is relevant if “the expert's scientific, technical, or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue.” *Fed. R. Evid.* 702. See also, *Barrett*, 606 F.3d at 980 (concluding that a plaintiff in a toxic tort strict liability case is required to establish causation through expert testimony). “Expert testimony assists the trier of fact when it provides information beyond the common knowledge of the trier of fact.” *Kudabeck v. Kroger Co.*, 338 F.3d 856, 860 (8th Cir. 2003). The rule clearly is one of admissibility rather than exclusion. *Id.*

“The proponent of the expert testimony must prove its admissibility by a preponderance of the evidence.” *Lauzon v. Senco Prods., Inc.*, 270 F.3d 681, 686 (8th Cir. 2001). The court may consider several factors in determining the soundness of scientific methodology including: (1) whether the theory or technique can be and has been tested; (2) whether the theory or technique has been subjected to peer review and publication; (3) the known or potential rate of error and the existence and maintenance of standards controlling the technique; and (4) whether the theory or technique used has been generally accepted in the relevant scientific community. *Daubert*, 509 U.S. at 593–594; see also *Kumho Tire Co. v. Carmichael*, 526 U.S. 137, 149–50 (1999) (ruling that the *Daubert* factors may be applied to determine the admissibility of an engineering expert's testimony). Under *Daubert*, district courts apply a number of nonexclusive factors in performing this role, including “whether the expertise was developed for litigation or naturally flowed from the expert's research;” whether the expert ruled out other alternative explanations; and whether the expert sufficiently connected the proposed testimony with the facts of the case. *Lauzon*, 270 F.3d at 686–87. “Relevant reliability concerns may focus on personal knowledge or experience” and the

factors used to evaluate an expert's testimony “depend [] upon the particular circumstances of the particular case at issue.” [Kumho Tire](#), 526 U.S. at 150. The proponent may show relevance by showing “the reasoning or methodology in question is applied properly to the facts in issue.” [Id.](#) at 758.

The Court applies a relaxed standard of causation under the FELA. [CSX Transp., Inc. v. McBride](#), 564 U.S. 685 (2011); [Paul v. Missouri Pac. R. Co.](#), 963 F.2d 1058, 1061 (8th Cir. 1992). “Under [the FELA] the test of a jury case is simply whether the proofs justify with reason the conclusion that employer negligence played any part, even the slightest, in producing the injury or death for which damages are sought.” [Id.](#) This modified standard of causation does not, however, change the [Daubert](#) analysis. See [Steggall v. BNSF Ry. Co.](#), No. 7:18CV5000, 2019 WL 1492579, at *3 (D. Neb. Apr. 4, 2019) (“The [Daubert](#) standard governs the application of Rule 702 and applies to FELA and non-FELA actions.”); [In re Conrail Toxic Tort FELA Litig.](#), No. CIV. A 94-11J, 1998 WL 465897, at *6 (W.D. Pa. Aug. 4, 1998) (holding [Daubert](#) is properly applied in a FELA case); [Hose v. Chi. NW. Transp. Co.](#), 70 F.3d 968, 972 (8th Cir. 1995) (applying [Daubert](#) in a FELA action challenging plaintiff’s proposed expert testimony).

To prove causation in a toxic tort case, a plaintiff must show both general causation, “that the alleged toxin is capable of causing injuries like that suffered by the plaintiff in human beings subjected to the same level of exposure as the plaintiff,” and specific causation, that the toxin was a cause of the plaintiff’s injury. [Mattis v. Carlon Elec. Prod.](#), 295 F.3d 856, 860 (8th Cir. 2002). To prove exposure levels, plaintiffs need not produce a “mathematically precise table equating levels of exposure with levels of harm.” [Mattis](#), 295 F.3d 856, 860-61. Rather, a plaintiff need only make a threshold showing that he or she was exposed to toxic levels known to cause the type of injuries he or she suffered. [Id.](#)

2. Analysis

Dr. Chiodo is no doubt qualified to render opinions on general and specific medical causation. And he bases his opinions on the knowledge, training, and experience derived from “a whole course of work.” ([Filing No. 31-3, at CM/ECF p. 9](#), 34:4-8). However, qualified or not, he cannot offer scientifically reliable opinions when he lacks the relevant facts.

Dr. Chiodo states he performed a differential etiology assessment to formulate his opinions. A “medical opinion about causation, based upon a proper differential diagnosis is sufficiently reliable to satisfy Daubert.” [Bland v. Verizon Wireless, \(VAW\) L.L.C.](#), 538 F.3d 893, 897 (8th Cir. 2008); [Turner v. Iowa Fire Equipment Co.](#), 229 F.3d 1202, 1208 (8th Cir. 2000). “In performing a differential diagnosis, a physician begins by ‘ruling in’ all scientifically plausible causes of the plaintiff’s injury. The physician then ‘rules out’ the least plausible causes of injury until the most likely cause remains.” [Glastetter v. Novartis Pharm. Corp.](#), 252 F.3d 986, 989 (8th Cir. 2001).

The testifying doctor must have some factual basis for ruling in potential causes. In this case, Dr. Chiodo knows little or nothing about the job Timothy O’Neill performed for the railroad. He knows Timothy O’Neill sprayed “herbicides” to keep his work area clear, but he does not know what herbicide was used and, accordingly, its chemical composition. He does not know the concentration of the spray used. He does not know how frequently Timothy O’Neill sprayed weeds: Was it daily, weekly, monthly, or yearly? And as to the days when spraying was done, he does not know if Timothy O’Neill did the spraying or watched others doing it and how much time per day or per location was devoted to spraying or being in the vicinity. He does not know if there were intervals of non-spraying between time

periods of spraying in any given day, and if so, the length of any breaks for fresh air.

While Socorra O'Neill testified that Timothy O'Neill's clothes had a chemical smell at the end of a work day, Dr. Chiodo does not know what caused that smell and acknowledges he is not considering the smell itself as supporting his opinion. There is no evidence that Timothy O'Neill had any physical symptoms that could be related to spraying herbicide.

Dr. Chiodo did not review or request Timothy O'Neill's job description, UPRR air sampling data, MSDS sheets, or even the identity of the herbicide Timothy O'Neill used before formulating his opinions. He has never done primary or secondary research on multiple myeloma or herbicides: Any research in these areas was performed for this lawsuit.

Upon review of that research and having considered Dr. Chiodo's explanation of why the research is significant and applicable to this case, the court is not convinced that the cited research supports Dr. Chiodo's testimony. Dr. Chiodo searched for articles that would corroborate his initial causation opinions and located an article discussing farming and multiple myeloma. From that article, he concluded an association exists between multiple myeloma and herbicide use, (the "Perrotta Study"). However, the article finds an association with pesticide use and no association with herbicide use.

Dr. Chiodo cites the Heineman Article as corroborating his opinion that exposure to railroad work causes multiple myeloma. ([Filing No. 31-4, at CM/ECF p. 3](#)). However, he testified that exposing an employee to "railroad work" is not negligent. Moreover, the Heineman Article was performed using government data for Danish males diagnosed with multiple myeloma from 1970 to 1984, only 12 of

whom were “road/railroad workers,” and the potential causal agents investigated did not include herbicides. Engine exhaust was listed as an investigated causal agent, but Dr. Chiodo ruled that out as a potential cause of multiple myeloma. And the Heineman Article concludes there is a low attributable risk between occupation and the etiology of multiple myeloma.

Finally, Dr. Chiodo found articles discussing the association between glyphosates and myeloma (the Wang Study) and between phenoxyacetic acids or dioxins and lymphoma (the Eriksson Study) to corroborate his opinion. But he does not know the type of herbicide at issue, and therefore whether phenoxyacetic acids, dioxins, or glyphosates are relevant to Timothy O’Neill’s case. Dr. Chiodo uses the Eriksson Study as evidence that as early as 1992, the railroad was on notice of the causal link between “herbicides” and multiple myeloma. But he did not and cannot explain how a study about herbicides widely used for agriculture and forestry in Sweden is relevant to railroad work Timothy O’Neill began doing a decade later in the United States. Even if he could explain the connection between the Eriksson Study and this case, Dr. Chiodo does not know (and did not ask before formulating his opinions) whether Timothy O’Neill used or had access to personal protective equipment when spraying weeds.

Under Daubert, Dr. Chiodo must be able to say more than “Timothy O’Neill was exposed to railroad work and herbicides; exposure to herbicides of an unknown type or brand and in an some unknown amount are associated with an increased risk of multiple myeloma; and therefore exposure to railroad work and herbicides caused or contributed to Timothy O’Neill’s multiple myeloma. [Byrd v. Union Pac. R.R. Co.](#), No. 8:18CV36, 2020 WL 1848496, at *8 (D. Neb. Apr. 13, 2020) (citing [Brown v. Burlington N. Santa Fe Ry. Co.](#), 765 F.3d 765, 774-75 (7th Cir. 2014)). This type of opinion, “connected to existing data only by the ipse dixit of the expert,” is inadmissible. [Gen. Elec. Co. v. Joiner](#), 522 U.S. 136, 146 (1997));

see also [American Auto. Ins. Co. v. Omega Flex, Inc.](#), 783 F.3d 720, 722-23 (8th Cir. 2015).

Even assuming Dr. Chiodo properly ruled in railroad work and herbicides as possible causes of Timothy O'Neill's multiple myeloma, he did not complete a differential etiology assessment to determine specific causation. After accumulating the possible causes of Timothy O'Neill's multiple myeloma, Dr. Chiodo did nothing more. He made no attempt to rule out any of the possible causes, particularly to include ruling out Timothy O'Neill's smoking as the sole cause. The relaxed standard of causation under FELA still requires an expert to apply a differential diagnosis to "rule out" alternative causes as the sole cause. [Byrd](#), No. 8:18CV36, 2020 WL 1848496, at *8 (citing [Brown](#), 765 F.3d at 773); [In re Conrail Toxic Tort FELA Litig.](#), No. CIV. A 94-11J, 1998 WL 465897, at *6).

A trial judge must make a preliminary assessment of whether the proffered expert's methodology is both scientifically valid and applicable to the case. [Bland](#), 538 F.3d at 896. The court is tasked with deciding whether the proffered expert, whether basing testimony upon professional studies or personal experience, "employs in the courtroom the same level of intellectual rigor that characterizes the practice of an expert in the relevant field." [Marmo v. Tyson Fresh Meats, Inc.](#), 457 F.3d 748, 757 (8th Cir. 2006) (quoting [Kumho Tire](#), 526 U.S. at 152).

"Expert testimony is inadmissible if it is speculative, unsupported by sufficient facts, or contrary to the facts of the case." [Marmo](#), 457 F.3d at 757. Under the facts presented, the analytical gap between the data (or the lack thereof) and Dr. Chiodo's proffered opinion is too great. [Gen. Elec. Co. v. Joiner](#), 522 U.S. at 146. For the reasons stated above, the court concludes that Dr. Chiodo's opinions are not reliable and relevant, and they are inadmissible under [Daubert](#).

MOTION FOR SUMMARY JUDGMENT

A. Standard of Review

Summary judgment is proper if the movant shows that there is no genuine dispute as to any material fact and that the movant is entitled to judgment as a matter of law. See [Fed. R. Civ. P. 56\(a\)](#). The movant bears the initial responsibility of informing the Court of the basis for the motion, and must identify those portions of the record which the movant believes demonstrate the absence of a genuine issue of material fact. [Torgerson v. City of Rochester, 643 F.3d 1031, 1042 \(8th Cir. 2011\)](#) (en banc). If the movant does so, the nonmovant must respond by submitting evidentiary materials that set out specific facts showing that there is a genuine issue for trial. [Id.](#)

On a motion for summary judgment, facts must be viewed in the light most favorable to the nonmoving party only if there is a genuine dispute as to those facts. [Id.](#) Credibility determinations, the weighing of the evidence, and the drawing of legitimate inferences from the evidence are jury functions, not those of a judge. [Id.](#) But the nonmovant must do more than simply show that there is some metaphysical doubt as to the material facts. [Id.](#) In order to show that disputed facts are material, the party opposing summary judgment must cite to the relevant substantive law in identifying facts that might affect the outcome of the suit. [Quinn v. St. Louis Cty., 653 F.3d 745, 751 \(8th Cir. 2011\)](#). The mere existence of a scintilla of evidence in support of the nonmovant's position will be insufficient; there must be evidence on which the jury could conceivably find for the nonmovant. [Barber v. C1 Truck Driver Training, LLC, 656 F.3d 782, 791-92 \(8th Cir. 2011\)](#). Where the record taken as a whole could not lead a rational trier of fact to find for the nonmoving party, there is no genuine issue for trial. [Torgerson, 643 F.3d at 1042](#).

B. Analysis.

To be successful on the FELA claim, Plaintiff must prove causation. Expert testimony is required to establish medical causation in a FELA case. [Brooks v. Union Pac. R. Co.](#), 620 F.3d 896, 899 (8th Cir. 2010). Dr. Chiodo is the sole expert designated to testify about causation and foreseeability. However, his opinions do not provide a scientifically reliable basis for finding medical causation as required by [Daubert](#). As such, UPRR's motion for summary judgment will be granted.

Accordingly,

IT IS ORDERED:

- 1) UPRR's motion to strike Dr. Chiodo's opinions, ([Filing No. 30](#)), is granted;
- 2) UPRR's motion for summary judgment, ([Filing No. 29](#)), is granted;
- 3) Judgment will be entered accordingly.

July 23, 2020

BY THE COURT:

s/ Cheryl R. Zwart
United States Magistrate Judge